

The Advantages of the MGL-140 for the Marine Corps

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The Advantages of the MGL-140 for the Marine Corps

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to

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Introduction

The Marine Corps must recognize that they can no longer delay replacing the M203 with the Milkor MGL-140 multi-purpose grenade launcher. With smarter, advanced weapon systems, infantry Marines can improve their maneuvers with direct and indirect fire and achieve greater success on the urban battlefield.

Evolution of the Grenade Launcher

The M203 40mm Grenade Launcher was developed in the late 1970s and entered military service in the early 1980s as a replacement to the M79 Grenade Launcher (a seven-pound, single shot, break barrel 40mm Grenade Launcher used in the 1960s specifically during the Vietnam War). In contrast the M203 is a three-pound, single shot, breech loading, pump action weapon designed to be attached to the M16A2 Service Rifle (total weight of twelve pounds when attached to the M16A2). This weapon has a sustained rate of fire of seven to nine rounds per minute. It is capable of firing both lethal and non-lethal ammunition including: High Explosive (HE), High Explosive Dual Purpose (HEDP), White Star Cluster (WSC), CS ("tear gas"), and riot control rounds. When engaging point targets the M203 utilizes a quadrant sight aiming system that may be attached to the M16A2's carrying handle. When firing at an area target the M16A2's iron sights are utilized.¹ Although the M203 is an effective weapon

system capable of fulfilling numerous present day missions for the Marine Corps, its overall technology remains outdated and ill equipped to support advanced operations. The specifications and accompanying advantages of the Milkor MGL-140 supercede those of the M203.

The Milkor MGL-140 is a 14-pound, 40x46 caliber six round multiple grenade launcher. It is an upgraded version of the Milkor MGL Mk-1 (originally produced in 1983 for U.S. Special Forces). Today the MGL-140 is used by 35 countries worldwide, five of which serve under NATO.² "The original six-shot MGL Mk-1, which began production in 1983, quickly established itself as one of the premier force multipliers available to mobile infantry and private military companies (PMCs) around the world."³ It has been utilized with great distinction in MOUT environments and has great potential for future SASO missions, specifically in Iraq and Afghanistan. Additionally, the MGL-140 is designed as an area weapon with a high rate of fire. Six 40mm caliber grenades can be fired in three seconds at ranges of up to 400 meters, effectively covering a minimum area of 20x60 meters. It can also be used in pinpoint situations at up to 150 meters. It is tested and qualified according to MIL-STDs. The concept has been proven in crowd control, peacekeeping missions and even combats situations in several countries. The MGL-140 features a stainless steel frame and a Picatinny sight rail. The

sight base provides rapid range adjustment and compensates automatically for the drift of the grenades. The reflex sight provides full nighttime capability and the grid reticule allows quick aiming point adjustment and range estimation. It also features a MIL-STD-1913 compatible accessory mount with four mounting surfaces. The modular butt-stock is retractable and padded to further enhance operational capability. The MGL-140 has a chamber length of 140mm and is specifically designed for specialized non-lethal missions by peacekeeping forces, for crowd control operations and for point duties.⁴ Most importantly, the MGL-140 is a "stand alone" platform (meaning that it does not require being attached to a M16A2 to be fired).

Reasons for not purchasing the MGL-140 Grenade Launcher

Although the Marine Corps has identified the need for a new grenade launcher since the mid 1990's the primary reason for it being slow to follow through with procurement can be directly related to the total number of M16A2 Service Rifles found in the Marine Corps' inventory. The M16A2 Service Rifle is the standard semi-automatic assigned to all basic combat and non-combat arms occupational specialties. Every Marine prior to joining the operational forces must qualify with this weapon in either Boot Camp or at The Basic School, thus ensuring that it is the most common weapon system found in any unit's armory. The fact that the M203 grenade launcher can be attached to the

M16A2 is the primary reason that it continues to stay in service, vice being replaced by the MGL-140. The argument for keeping the M203 around in such large numbers, put simply, is that it would mean the reduction of the total number of M16A2s owned and maintained by the Marine Corps. Although difficult as it is to admit, this can no longer be the reason for not accepting the MGL-140 as the grenade launcher of the future.

Advantages of the MGL-140 Grenade Launcher

While a comparison of the specifications of the M203 and MGL-140 portrays the fundamental benefits of modern weapon systems technology, the true advantages of the MGL-140 are apparent upon further analysis of the ammunition it can support. The range of ammunition associated with the MGL-140 encompasses the current 40mm ammunition utilized by the M203 as well as more advanced variants that are not supported by the M203. These include the HELLHOUND Low Velocity Multi-Purpose Grenade round, the MEI Direct Range Air Consuming Ordnance (DRACO) Enhanced Blast Explosive round and the High-Altitude Unit Navigated Tactical Imaging Round (HUNTIR).⁵

The HELLHOUND round produces forty percent more shrapnel, has a lethal diameter of ten meters and is loaded with twice the explosive charge of the current M433 Multi-Purpose Grenade used by Marines. This round is specifically designed for use against dismounted infantry and as a door-breaching munition in MOUT.⁶

The DRACO Enhanced Blast Explosive round is an armor-piercing variant that utilizes a "spit-back" charge. A spit back charge produces an explosive train from the base of the round to the forward tip, emitting a stream of molten metal and a fragment pattern capable of penetrating 65mm steel. This versatile round is designed for use against dismounted infantry and room-clearing operations in MOUT.⁷

The HUNTRIR round is an experimental observation round designed to reach an average height of seven thousand feet before deploying a parachute assembly to slow its descent, all the while providing video feed. During descent an internal camera is able to provide five minutes of real-time streaming video to a handheld device. This technology enables Marines to keep a standoff distance of one mile while maintaining a line-of-sight between the HUNTRIR round and handheld device. This round is specifically designed for MOUT environments and in areas with severely restricted terrain.⁸

These three types of rounds are all capable of proving their worth in the operating forces at this time.

Lessons from the Urban Battlefield

Recent military operations in Iraq and Afghanistan have provided the Marine Corps with real-world lessons about the importance of being able to mass fires through the utilization of mortars and close fire assets in combination with maneuver

elements. For Company and Platoon Commanders, these are great assets to rely on and utilize. However, when immediate response is required being able to alter the conduct of operations with organic company level assets can ensure efficient and effective mission accomplishment. Additionally, the employment of mass fires through weapon systems such as mortars and CAS is accompanied by strict limitations, such as trajectory of fires, airspace deconfliction and specific equipment requirements. These issues must be taken into consideration and mitigated before they have the opportunity to pose problems when an operation begins. If not, then creativity and communication between units becomes tantamount to achieve success as exemplified in the following account by Captain James T. Cobb, USA in Fallujah:

Our mortar platoon received two M252 81-mm mortars before deploying to the Fallujah AOR. These were useful indirect fire weapons when close fires were required. The only drawback was they had no sights. To use them, we had to take sights from the 120-mm tubes and use the sights with the 81-mm mortars, taking two 120-mm tubes out of the fight. The mortars' high angle of fire was preferable for military operations in urban terrain (MOUT), but there were times when the mortars' maximum ordinate (MAXORD) exceeded the close air support (CAS) ceiling, limiting mortar fires.⁹

Scenarios such as this one illustrate the relevance for assessing equipment that can better serve Marines deployed to countries and regions where tactics require immense flexibility. Purchasing and issuing MGL-140s can mitigate the uncertainties

associated with elaborate operations, such as the one faced in Fallujah, and in other MOUT environments.

Conclusion

Although the Marine Corps would lose several M16A2s from its armories the MGL-140 is the right weapon system for the current operations being conducted by Marines abroad. This weapon system has the versatility needed to be useful for several decades to come.

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Works Cited

¹M230 40mm Grenade Launcher, <http://www.hqmc.mil/factfile.nsf>

²Crane, David, "New Milkor MGL-140/MEI Hyper-Lethal 40mm Combo/Weapon System for Infantry", <http://www.defensereview.com/article800.html>, p. 1 (cited October 21, 2005)

³Ibid, 1

⁴Milkor, USA INC., http://www.defensereview.com/1_31_2004/MGL140.pdf

⁵Crane, David, "New Milkor MGL-140/MEI Hyper-Lethal 40mm Combo/Weapon System for Infantry", <http://www.defensereview.com/article800.html>, p.3 (cited October 21, 2005)

⁶Crane, David, "New Milkor MGL-140/MEI Hyper-Lethal 40mm Combo/Weapon System for Infantry", <http://www.defensereview.com/article800.html>, p.3 (cited October 21, 2005)

⁷Crane, David, "New Milkor MGL-140/MEI Hyper-Lethal 40mm Combo/Weapon System for Infantry", <http://www.defensereview.com/article800.html>, p.4 (cited October 21, 2005)

⁸Crane, David, "New Milkor MGL-140/MEI Hyper-Lethal 40mm Combo/Weapon System for Infantry", <http://www.defensereview.com/article800.html>, p.5 (cited October 21, 2005)

⁹Cobb, Captain James T., USA, "TF 2-2 IN FSE AAR: Indirect Fires in the Battle of Fallujah", March-April 2005 Field Artillery, p. 3